

CLAIMS

We claim:

1. Process for the manufacture of shaped articles by extrusion blow molding comprising the steps of:

- (1) extruding a copolyester through a die to form a tube of molten copolyester;
- (2) positioning a mold having the desired finished shape around the tube of molten copolyester; and
- (3) introducing a gas into the tube of molten copolyester, causing the extrudate to stretch and expand to fill the mold;

wherein the copolyester is a linear, copolyester having an inherent viscosity (IV) of at least about 0.7 dL/g measured at a temperature of 25°C at 0.5 g/dL concentration in a solvent mixture of symmetric tetrachloroethane and phenol having a weight ratio of symmetric tetrachloroethane to phenol of 2:3 and comprising:

- (1) a diacid component consisting essentially of about 90 to 100 mole percent terephthalic acid residues and 0 to about 10 mole percent isophthalic acid residues, naphthalenedicarboxylic acid residues, biphenyldicarboxylic acid residues or a combination of 2 or more of isophthalic, naphthalenedicarboxylic or biphenyldicarboxylic acid residues; and
- (2) a diol component consisting essentially of about 70 to 90 mole percent 1,4-cyclohexanedimethanol residues and about 30 to 10 mole percent neopentyl glycol residues;

wherein the copolyester comprises 100 mole percent diacid component and 100 mole percent diol component.

2. The process of Claim 1 wherein the copolyester comprises a diacid component consisting essentially of at least 95 mole percent terephthalic acid residues.

3. The process of Claim 1 wherein the copolyester comprises a diacid component consisting essentially of 100 mole percent terephthalic acid residues.

4. Process according to Claim 3 wherein the copolyester has an inherent viscosity (IV) of about 0.9 to 1.2 dL/g.

5. Process according to Claim 4 wherein the copolyester is manufactured by a solid state polymerization process.

6. Process for the manufacture of a container having a volume of about 2 to 50 liters by extrusion blow molding comprising the steps of:

- (1) extruding a copolyester through a die to form a tube of molten copolyester;
- (2) positioning a mold having the desired finished shape of the container around the tube of molten copolyester; and
- (3) introducing a gas into the tube of molten copolyester, causing the extrudate to stretch and expand to fill the mold;

wherein the copolyester is a linear, copolyester having an inherent viscosity (IV) of at least about 0.9 to 1.2 dL/g measured at a temperature of 25°C at 0.5 g/dL concentration in a solvent mixture of symmetric tetrachloroethane and phenol having a weight ratio of symmetric tetrachloroethane to phenol of 2:3 and comprising:

- (1) a diacid component consisting essentially of terephthalic acid residues; and
- (2) a diol component consisting essentially of about 70 to 90 mole percent 1,4-cyclohexanedimethanol residues and about 30 to 10 mole percent neopentyl glycol residues;

wherein the copolyester comprises 100 mole percent diacid component and 100 mole percent diol component.

7. Process according to Claim 6 wherein the molten copolyester has a temperature of about 250 to 300°C.

8. An extrusion blow molded article produced from a linear copolyester having an inherent viscosity (IV) of at least about 0.7 dL/g measured at a temperature of 25°C at 0.5 g/dL concentration in a solvent mixture of symmetric tetrachloroethane and phenol having a weight ratio of symmetric tetrachloroethane to phenol of 2:3 and comprising:

- (1) a diacid component consisting essentially of 90 to 100 mole percent terephthalic acid residues and 0 to about 10 mole percent isophthalic acid residues, naphthalenedicarboxylic acid residues, biphenyldicarboxylic acid residues or a combination of 2 or more of isophthalic, naphthalenedicarboxylic or biphenyldicarboxylic acid residues; and
- (2) a diol component consisting essentially of about 70 to 90 mole percent 1,4-cyclohexanedimethanol residues and about 30 to 10 mole percent neopentyl glycol residues;

wherein the copolyester comprises 100 mole percent diacid component and 100 mole percent diol component.

9. An extrusion blow molded article according to Claim 8 wherein the copolyester comprises a diacid component consisting essentially of at least 95 mole percent terephthalic acid residues.

10. An extrusion blow molded article according to Claim 8 wherein the copolyester comprises a diacid component consisting essentially of 100 mole percent terephthalic acid residues.

11. An extrusion blow molded article according to Claim 10 wherein the copolyester has an inherent viscosity (IV) of about 0.9 to 1.2 dL/g.

12. An extrusion blow molded article according to Claim 8 wherein the copolyester comprises a diacid component consisting essentially of 100 mole percent terephthalic

acid residues; the copolyester has an inherent viscosity (IV) of about 0.9 to 1.2 dL/g; and the shaped article is a bottle having a volume of about 2 to 50 liters.